ENDEAVOUR FOUNDATION

Helping people with intellectual disability live their best lives, supported by Lenovo technology.

Working with disparate, end-of-life hardware made it difficult for Endeavour Foundation's IT staff to reliably deliver the system availability and performance the non-profit required to fulfill its mission. To reduce TCO, boost resilience and provide non-disruptive scalability for the future, the organization deployed a hyperconverged infrastructure based on the Lenovo ThinkAgile HX Series platform with Nutanix Enterprise Cloud software.

Endeavour Foundation supports people with disability to live learn, work and flourish according to their own interests and priorities. Whether it's learning new skills, living independently, socialising and making new friends, finding a job or exploring interests and trying new friends, the not-for-profit works with people with disability to make their dreams a reality.

Endeavour Foundation is at the heart of local communities and offers supported independent living, specialist disability accommodation, supported employment, learning and life skills development and day services to more than 4,000 people across Queensland, New South Wales and Victoria.

To coordinate the activities of its 2,200-strong workforce, Endeavour Foundation relies on a number of applications across communications, general business functions and financial management. Many of these were running on hardware procured more than ten years previously that was difficult to scale and maintain.

With disparate types of hardware across compute, storage and network elements of the infrastructure, Endeavour Foundation's IT team was struggling to ensure adequate performance and reliability for its users.

Isaac Nicol, ICT Infrastructure Manager at Endeavour Foundation, explains: "Our existing infrastructure was fragmented into multiple silos, each with its own set of monitoring and management tools. There was no real redundancy built into the system, and practically no automation in place. At one point, we were having to log in at 4am daily to clear the Exchange server cache so that business users could reliably access their email!"

While data volumes continued to rise, Endeavour Foundation could not expand its storage capacity any further. To stay afloat, the IT team had to manually archive less-used files and folders to external hard drives.

"At the time of deployment, the infrastructure was perfect for our needs," says Isaac Nicol. "However, the organization had since outgrown it, and it was time to invest in a new solution that would deliver better performance and availability while also freeing up IT staff from manual maintenance."

In addition to its on-premises infrastructure, Endeavour Foundation has some systems running on co-located hardware, and hosts its most critical applications with a third party. The organization wanted a solution that would enable it to consolidate these three touchpoints into a single environment, in order to reduce complexity and costs.

Endeavour Foundation ran a detailed exercise to compare a cloud-based option against a hyperconverged solution that would unite compute, storage and networking elements into a single system. The comparison exercise included full costing over three, five and ten years of ownership, and took into account both administration and future scalability.

"Considering cost, viability, support, resilience and the ability to consolidate systems to a single point of control, we concluded that a hyperconverged solution based on Nutanix Enterprise Cloud software would be the best option for Endeavour," says Isaac Nicol. "Nutanix recommended that we deploy on Lenovo ThinkAgile HX hardware."

Tony Saba, Network and Systems Specialist at Endeavour Foundation, adds: "We determined that the TCO for a Nutanix and Lenovo hyperconverged solution would be much lower than for a cloud-based solution. As part of future planning, we asked Lenovo to talk us through refreshing the hardware. We'll be able to simply replace the live nodes one by one, with zero service degradation for business users, which is very impressive."

Backed by Lenovo Professional Services, Endeavour Foundation implemented a five-node Lenovo ThinkAgile HX5521 cluster. Combining best-in-class Lenovo servers, equipped with powerful Intel® Xeon® Scalable processors, and industry-leading Nutanix Enterprise Cloud software, the Lenovo ThinkAgile HX Series platform unites compute and storage in a single virtual structure for flexible resource allocation and seamless scalability. A Lenovo top-of-rack NE1032 switch provides 10Gb/s connectivity and a Lenovo DE2000H is used for data backup, managed on a nightly incremental basis using HYCU software. A second DE2000H provides additional resilience for data, and will ultimately be moved to a remote site for disaster recovery.

Brenda Boyce, Project Manager at Endeavour Foundation, says: "Lenovo did a lot of configuration work in the pre-sales process to make sure that the solution would meet our needs. Nothing was too much trouble for the Lenovo team."

As the first step in its consolidation to the Lenovo hyperconverged infrastructure, Endeavour Foundation migrated around 90 VMware virtual machines to the platform, running workloads including Microsoft Exchange Server, Microsoft SQL Server and various web servers. At a later stage, the organization plans to replace the VMware hypervisor with the built-in Nutanix AHV virtualization solution, to reduce its costs. It will also set up a duplicate hyperconverged solution in a second data center before migrating its tier-one applications, including Microsoft Dynamics financials and the NDIS payments solution.

"Deploying the Lenovo and Nutanix solution had an immediate positive impact," says Isaac Nicol. "Our Exchange server was always struggling for resources before. As soon as we got it into the hyperconverged environment, we could magically add extra resources to it. Uptime is much better, and we no longer feel limited by our infrastructure: Lenovo and Nutanix have given us a great foundation for the future."

Isaac Nicol says: "The Lenovo and Nutanix solution has given us a new direction on what a data center should look like, replacing clutter with a slick and streamlined physical footprint. We've been able to decommission four whole racks, and the new management tools mean that we rarely need to touch the hardware."

Tony Saba adds: "The Nutanix Prism GUI is both powerful and easy to understand, and the reporting is very detailed. The system alerts us to potential issues ahead of time, which really helps us as engineers in terms of minimizing the time and effort we spend on trouble-shooting. The visibility we now have is unprecedented: we can see at a glance if a VM is over- or under-specced, and adjust the system resources accordingly."

Endeavour Foundation is making further savings in time and effort thanks to the Lenovo XClarity management tool, which enables engineers to monitor and configure all hardware components from a single point of control. "Lenovo XClarity is a great solution: straightforward but powerful," says Isaac Nicol. "We can connect directly to any machine from a single console, and get guided advice on how to resolve issues. As a team, we're saving at least 10 hours a week simply on the routine checking of infrastructure. In addition, we can send detailed reports directly to Lenovo at the touch of a button if we need deeper support."
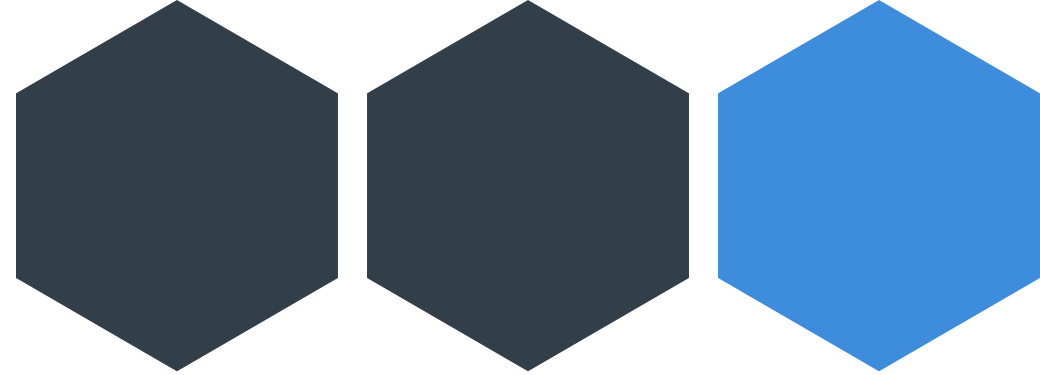
With the Lenovo and Nutanix hyperconverged solution in place, Endeavour Foundation is already reaping the rewards of improved service availability, increased ease of operation, reduced TCO and enhanced resiliency. As the organization progresses with its plan to consolidate all other elements of its systems landscape to the Lenovo ThinkAgile HX Series platform, the resulting simplified and centralized architecture will be much easier to scale up than the previous disparate infrastructure.

Isaac Nicol comments: "The Lenovo and Nutanix hyperconverged solution is already proving its value in terms of its streamlining, resilience, flexibility and scalability. Lenovo has been very easy to work with throughout the process, and the Lenovo technology combines really well with the Nutanix software to give us a seamless solution and a single target for future investment."

Crucially, with back-end operations running smoothly, Endeavour Foundation can ensure that its front-line services run smoothly too.

Isaac Nicol concludes: "Improved availability, reliability and performance of business applications means that users have quick, easy access to everything they need to support customers – whether that's helping them to learn new skills, live independently or find employment – so that they can live fulfilling lives."

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– Isaac Nicol, ICT Infrastructure Manager, Endeavour Foundation

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